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EXAMINER	
PATEL, NIMESH	

ART UNIT	PAPER NUMBER
2617	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/560,079	AALTONEN, JANNE	
	Examiner	Art Unit	
	NIMESH PATEL	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 November 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13,16 and 18-29* is/are pending in the application.

4a) Of the above claim(s) *14, 15 and 17* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13,16 and 18-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Detailed Action

Response to Arguments

1. Applicant's arguments filed on Nov. 19, 2010, with respect to claims 1 – 13, 16 and 18 - 29 have been fully considered but are moot in view of new ground(s) of rejections.

Claims 14, 15 and 17 are canceled.

Claim Rejections - 35 USC § 112

2. In applicant arguments/response, it says - the applicant respectfully disagrees. Nevertheless, to facilitate persecution with this response the applicant amends claims 1, 18, 20 and 22 - 24. No new matter has been added - on page 12, lines 11 - 12.

The examiner's response, the applicant is hereby requested to show exactly where in the specification the claimed feature is shown, by showing some Fig. #/ component #, or page and line number from the specification.
As if now, the applicant had not responded back by showing the exact support of the claimed features, so 112 1st and 2nd rejection is hereby maintained.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 18, 20, 22, 23 and 24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The phrase “determining to maintain to communicate, with completion of said handover, traffic via an uplink connection of the digital generally bi-directional communication service, wherein the traffic was communicated, prior to said handover, via the same uplink connection”, is being found in the claims, and the specification does not describe the claimed feature.

The phrase “handover is performed ONLY between a downlink of a digital generally bi-directional communications service and a digital generally unidirectional broadcast communications service”, is being found in claims 1, 22, 23 and 24, and the specification does not describe the claimed feature.

The phrase “for moving a downlink service delivered via the cellular mobile data communication domain to the digital broadcast data communication domain”, is

being found in claim 18, and the specification does not describe the claimed feature.

The phrase “for moving a downlink service delivered via the digital broadcast communication domain to the cellular mobile data communication domain”, is being found in claim 20, and the specification does not describe the claimed feature.

The applicants are invited to show where exactly the claimed feature is shown.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 18, 20, 22, 23 and 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The phrase “determining to maintain to communicate, with completion of said handover, traffic via an uplink connection of the digital generally bi-directional communication service, wherein the traffic was communicated, prior to said handover, via the same uplink connection”, is being found in the claims, and the specification does not describe the claimed feature.

The phrase "handover is performed ONLY between a downlink of a digital generally bi-directional communications service and a digital generally unidirectional broadcast communications service", is being found in claims 1, 22, 23 and 24, and the specification does not describe the claimed feature.

The phrase "for moving a downlink service delivered via the cellular mobile data communication domain to the digital broadcast data communication domain", is being found in claim 18, and the specification does not describe the claimed feature.

The phrase "for moving a downlink service delivered via the digital broadcast communication domain to the cellular mobile data communication domain", is being found in claim 20, and the specification does not describe the claimed feature.

It appears that some critical steps are missing in the claimed language, which makes the claims indefinite.

The applicants are invited to show where exactly the claimed feature is shown.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1 – 13, 16, 18, and 22 - 29 are under 35 U.S.C. 103(a) as being unpatentable over Brandes US Patent: US 6,920,327 B1 Jul. 19, 2005, and in view of Dorenbosch US PGPub: US 2004/0028009 A1 Feb. 12, 2004, and further in view of Cave US PGPub: US 2005/0070287 A1 Mar. 31, 2005.

Regarding claim 1, Brandes discloses,

a method (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through

column 7, line 43, claims 1, 10. Mobile radio networks with duplex operation – Fig. 1, column 3, lines 33 – 51. The switching device 3 sends and receives data to and from UMTS-S device 4, GSM device 6 and UMTS-T device 7 - column 4, lines 63 – 64. Broadcast distribution systems have only a downlink – column 3, line 51 through column 4, line 13. The switching device 3 only transmits data to DAB device 5, DVB-T device 8, DVB-S device 9 and DRM device 10 – column 4, lines 65 – 66, column 7, lines 35 - 43), comprising the steps of:

receiving a measurement about to available downlink radio signals (a computer may receive from a transmitter/receiver station, in a switching device that controls access to a communication network and receives and sends data via radio transmission, data that the computer then evaluates in order to allocate to the transmitter/receiver station appropriate radio transmission systems for a communication – Figs. 1, 2, column 2, lines 47 – 53, column 4, lines 13 – 21, column 4, lines 36 – 43, column 5, lines 20 – 40, column 6, lines 4 – 13, column 6, lines 20 – 28, column 7, lines 35 – 43. The data concerning the subscriber profile and the transmission quality may be transmitted to the computer via an uplink form the mobile transmitter/receiver station, so that a signaling operation may be utilized to use these data for radio transmission system selection. The transmission quality may be measured using a signal field strength and/or an error rate – Figs. 1, 2, column 1, line 65 through column 2, line 14);

determining to select according to a predetermined criteria one of the available downlink radio signals (the computer then evaluates in order to allocate to the transmitter/receiver station appropriate radio transmission systems for a communication – Figs. 1, 2, column 2, lines 47 – 53, column 4, lines 13 – 21, column 4, lines 36 – 43, column 5, lines 20 – 40, column 6, lines 4 – 13, column 6, lines 20 – 28, column 7, lines 35 – 43. The computer in switching device 3 calculates on the basis of the subscriber profile which service of a radio transmission system is the cheapest, and selects that service if the availability and speed of the transmitter/receiver station permit it – Fig/ 2/14, column 2, lines 47 – 53, column 6, lines 37 – 58, column 7, lines 35 - 43), and

determining to change to the selected available downlink radio signal for in part performing a handover (if the selected radio transmission does not meet the subscriber profile criteria at step 15, a new transmission system may be selected at step 14. Also, if the network capacity utilization is too high at step 17, a new transmission system may be selected at step 14. If this happened during a data transmission, the data flow that is being exchanged between transmitter/receiver stations 10 and the respective radio transmission system, is then handed over to the new radio transmission system device, so that no data loss occurs - Figs. 1, 2, column 2, lines 47 – 53, column 6 line 59 through column 7, line 6, column 7, lines 35 - 43), so that said handover is performed only (transmission of data

using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10) between a downlink of a digital generally bi-directional communications service (the switching device 3 sends and receives data to and from UMTS-S device 4, GSM device 6 and UMTS-T device 7 - column 4, lines 63 – 64) and
a digital generally unidirectional broadcast communications service (broadcast distribution systems have only a downlink – column 3, line 51 through column 4, line 13. The switching device 3 only transmits data to DAB device 5, DVB-T device 8, DVB-S device 9 and DRM device 10 – column 4, lines 65 – 66, column 7, lines 35 – 43); and

determining to maintain to communicate, with completion of said handover traffic (if the selected radio transmission does not meet the subscriber profile criteria at step 15, a new transmission system may be selected at step 14. Also, if the network capacity utilization is too high at step 17, a new transmission system may be selected at step 14. If this happened during a data transmission, the data flow that is being exchanged between transmitter/receiver stations 10 and the respective radio transmission system, is then handed over to the new radio

transmission system device, so that no data loss occurs - Figs. 1, 2, column 2, lines 47 – 53, column 6 line 59 through column 7, line 6, column 7, lines 35 - 43),

and determine to maintain to communicate with completion of said handover, wherein the traffic was communicated prior to said handover, via the uplink (a computer may receive from a transmitter/receiver station, in a switching device that controls access to a communication network and receives and sends data via radio transmission, data that the computer then evaluates in order to allocate to the transmitter/receiver station appropriate radio transmission systems for a communication. Here, the traffic is communicated prior to handover via the uplink– Figs. 1, 2, column 2, lines 47 – 53, column 4, lines 13 – 21, column 4, lines 36 – 43, column 5, lines 20 – 40, column 6, lines 4 – 13, column 6, lines 20 – 28, column 7, lines 35 – 43).

but, does not clearly disclose, traffic, via “an uplink of the digital generally bi-directional communications service”.

Dorenbosch teaches in detail, searching for an appropriate connection. Searching 909 for the appropriate wireless IP connection may include one or more of determining that an available connection includes an access point and suitable services (Fig. 9/909, paragraph 0055)..Setting up the second IP connection with the second IP address for the first station where the first IP

connection is a primary connection and the second IP connection is a secondary connection with both existing concurrently (ABSTRACT, Fig. 9/907, paragraph 0055). With both existing concurrent connections, but data is only sent through one (Fig. 2, paragraph 0024).

It would have been obvious to one of ordinary skill in the art, at the time of invention, to modify allocation of radio transmission systems for data transmission (Brandes, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10), would have been incorporated the concurrent connections for IP connections and seamless handoff between the first and second IP connections (Dorenbosch, ABSTRACT, Figs. 1 - 9, paragraphs 0024, 0055) for measuring the transmission quality using a signal field strength and/or an error rate, and allow a determination to be made as to the transmission quality of a radio transmission system (Brandes, column 2, lines 9 - 14).

Both Brandes and Dorenbosch teaches all the claimed features,

but, does not clearly disclose, maintaining the communication via the same uplink connection prior to said handover.

Cave teaches, after initiating soft handover, same uplink and downlink data with the current cell/sector is communicating using the currently used uplink and downlink timeslots (ABSTRACT, paragraphs 0012, 0023).

It would have been obvious to one of ordinary skill in the art, at the time of invention, to modify allocation of radio transmission systems for data transmission combined Brandes and Dorenbosch (Brandes, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10), would have been incorporated using the same uplink and downlink data before and after soft handover of Cave (Cave, ABSTRACT, paragraphs 0012, 0023), for design flexibility for code allocations for soft/softer handover, and all diversity schemes including selection diversity, gain to compensate for the poorer signal conditions (Cave, paragraphs 0010, 0011).

Regarding claim 2, Brandes discloses all the claimed features,

a method as claimed in claim 1, wherein the changing includes determining to send a partial handover command (during an existing transmission of data using a first radio transmission system, a change in parameters causes that transmission to be rerouted onto a second radio transmission system, so that the customer experiences no loss during the transmission of data – Fig. 1, column 2, lines 35 – 40. Switching device 3 includes a computer according to allocate for

transmitter/receiver station one or more appropriate radio transmission systems for a communication – Fig. 1, column 4, lines 36 – 39. Also, switching over by the computer, in the context of a subscriber profile, one of entirely and partially to another radio transmission system having a high transfer rate – ABSTRACT, Figs. 1, 2, column 1, lines 11 – 15, and claim 1).

Regarding claim 3, Brandes discloses,

a method as claimed in claim 2, wherein a user apparatus determines listen to the downlink radio signal (a computer may receive from a transmitter/receiver station, in a switching device that controls access to a communication network and receives and sends data via radio transmission, data that the computer then evaluates in order to allocate to the transmitter/receiver station appropriate radio transmission systems for a communication – Figs. 1, 2, column 4, lines 13 – 21, column 4, lines 36 – 43, column 5, lines 20 – 40, column 6, lines 4 – 13, column 7, lines 35 - 43), and determines to send a report on a listening result to a network element deciding the handover (the data concerning the subscriber profile and the transmission quality may be transmitted to the computer via an uplink form the mobile transmitter/receiver station, so that a signaling operation may be utilized to use these data for radio transmission system selection. The transmission quality may be measured using a signal field strength and/or an error rate – Figs. 1, 2, column 1, line 65 through column 2, line 14.Upon

signaling, a subscriber profile that includes data about a service quality requested by the subscriber may be transmitted by transmitter/receiver station 10. These data include the transmission rate, a permissible error rate, maximum cost that the subscriber wished to incur for a transmission, and whether he or she wishes, for example, to transmit voice data or other data, e.g., a quality of data for transmission - column 5, lines 29 – 40, column 6, lines 4 – 9, column 6, lines 20 – 28, column 7, lines 17 – 25, column 7, lines 25 - 43).

Regarding claim 4, Brandes discloses,

a method according to claim 1, wherein said method comprises performing the handover (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10) from a digital broadband data communication domain to (mobile radio networks with duplex operation – Fig. 1, column 3, lines 33 – 51. The switching device 3 sends and receives data to and from UMTS-S device 4, GSM device 6 and UMTS-T device 7 - column 4, lines 63 - 64)

a cellular mobile data communication domain (broadcast distribution systems have only a downlink – column 3, line 51 through column 4, line 13. The switching device 3 only transmits data to DAB device 5, DVB-T device 8, DVB-S device 9 and DRM device 10 – column 4, lines 65 – 66, column 7, lines 35 - 43) or vice versa (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10).

Regarding claim 5, Brandes discloses,

a method according to claim 1, wherein said method comprises selecting the downlink radio signal by via measurement signaling structure of inter-system handover of UMTS for the handover between said services (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1,

10).

Regarding claim 6, Brandes discloses,

a method according to claim 1, wherein said handover relates to a certain service leaving any other service transmitted via networks of said services still useable for a user apparatus (if the selected radio transmission does not meet the subscriber profile criteria at step 15, a new transmission system may be selected at step 14. Also, if the network capacity utilization is too high at step 17, a new transmission system may be selected at step 14. If this happened during a data transmission, the data flow that is being exchanged between transmitter/receiver stations 10 and the respective radio transmission system, is then handed over to the new radio transmission system device, so that no data loss occurs - Figs. 1, 2, column 2, lines 47 – 53, column 6 line 59 through column 7, line 6, column 7, lines 35 - 43).

Regarding claim 7, Brandes discloses,

a method according to claim 1, wherein, in said method, the handover process is adapted to use a native network level signaling for application independent handover between said services (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission

systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10).

Regarding claim 8, Brandes discloses,

a method according to claim 1, wherein said services are adapted to pertain to domains comprising a hybrid network system containing at least two functionally different network systems (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10. Mobile radio networks with duplex operation – Fig. 1, column 3, lines 33 – 51. The switching device 3 sends and receives data to and from UMTS-S device 4, GSM device 6 and UMTS-T device 7 - column 4, lines 63 – 64. Broadcast distribution systems have only a downlink – column 3, line 51 through column 4, line 13. The switching device 3 only

transmits data to DAB device 5, DVB-T device 8, DVB-S device 9 and DRM device 10 – column 4, lines 65 – 66, column 7, lines 35 - 43).

Regarding claim 9, Brandes discloses,

a method according to claim 1, wherein the method further comprises determining to continue unidirectional communication service reception in another cell area from current downlink communication received in a first cell area (during an existing transmission of data using a first radio transmission system, a change in parameters causes that transmission to be rerouted onto a second radio transmission system, so that the customer experiences no loss during the transmission of data – Fig. 1, column 2, lines 35 – 40. Switching device 3 includes a computer according to allocate for transmitter/receiver station one or more appropriate radio transmission systems for a communication – Fig. 1, column 4, lines 36 – 39. Also, switching over by the computer, in the context of a subscriber profile, one of entirely and partially to another radio transmission system having a high transfer rate – ABSTRACT, Figs. 1, 2, column 1, lines 11 – 15, and claim 1).

Regarding claim 10, Brandes discloses,

a method according to claim 1, wherein the digital generally unidirectional

communications service pertains to a domain comprising DVB-T ceils establishing a DVB-T network (broadcast distribution systems have only a downlink – column 3, line 51 through column 4, line 13. The switching device 3 only transmits data to DAB device 5, DVB-T device 8, DVB-S device 9 and DRM device 10 – column 4, lines 65 – 66, column 7, lines 35 - 43).

Regarding claim 11, Brandes discloses,

a method according to claim 1, wherein the digital generally unidirectional communications service comprises a wireless multi-carrier signal transmission (broadcast distribution systems have only a downlink – column 3, line 51 through column 4, line 13. The switching device 3 only transmits data to DAB device 5, DVB-T device 8, DVB-S device 9 and DRM device 10 – column 4, lines 65 – 66, column 7, lines 35 - 43).

Regarding claim 12, Brandes discloses,

a method according to claim 1, wherein said services pertain to domains comprising cells of wireless cellular networks and the user apparatus is adapted to wirelessly communicate with said domains (mobile radio networks with duplex operation – Fig. 1, column 3, lines 33 – 51. The switching device 3 sends and receives data to and from UMTS-S device 4, GSM device 6 and UMTS-T device

7 - column 4, lines 63 – 64. A computer may receive from a transmitter/receiver station, in a switching device that controls access to a communication network and receives and sends data via radio transmission, data that the computer then evaluates in order to allocate to the transmitter/receiver station appropriate radio transmission systems for a communication – Figs. 1, 2, column 2, lines 47 – 53, column 4, lines 13 – 21, column 4, lines 36 – 43, column 5, lines 20 – 40, column 6, lines 4 – 13, column 6, lines 20 – 28, column 7, lines 35 – 43).

Regarding claim 13, Brandes discloses,

an apparatus, comprising: a processor configured to perform the method according to claim 1 (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10).

Regarding claim 16, Brandes discloses,

an article of manufacture, comprising a computer readable medium containing computer readable program code configured to perform the method of claim 1

when run on a computer (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10).

Regarding claim 18, Brandes discloses,

a method (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10. Mobile radio networks with duplex operation – Fig. 1, column 3, lines 33 – 51. The switching device 3 sends and receives data to and from UMTS-S device 4, GSM device 6 and UMTS-T device 7 - column 4, lines 63 – 64. Broadcast distribution systems have only a downlink – column 3, line 51 through column 4, line 13. The switching device 3 only transmits data to

DAB device 5, DVB-T device 8, DVB-S device 9 and DRM device 10 – column 4, lines 65 – 66, column 7, lines 35 - 43), the method comprising:

determining to measure, at a user apparatus, received downlink radio signals (a computer may receive from a transmitter/receiver station, in a switching device that controls access to a communication network and receives and sends data via radio transmission, data that the computer then evaluates in order to allocate to the transmitter/receiver station appropriate radio transmission systems for a communication – Figs. 1, 2, column 2, lines 47 – 53, column 4, lines 13 – 21, column 4, lines 36 – 43, column 5, lines 20 – 40, column 6, lines 4 – 13, column 6, lines 20 – 28, column 7, lines 35 – 43. The data concerning the subscriber profile and the transmission quality may be transmitted to the computer via an uplink form the mobile transmitter/receiver station, so that a signaling operation may be utilized to use these data for radio transmission system selection. The transmission quality may be measured using a signal field strength and/or an error rate – Figs. 1, 2, column 1, line 65 through column 2, line 14) of a cellular mobile data communication domain (mobile radio networks with duplex operation – Fig. 1, column 3, lines 33 – 51. The switching device 3 sends and receives data to and from UMTS-S device 4, GSM device 6 and UMTS-T device 7 - column 4, lines 63 – 64) and a digital broadcast data communication domain (broadcast distribution systems have only a downlink – column 3, line 51 through column 4, line 13. The switching device 3 only transmits data to DAB device 5, DVB-T

device 8, DVB-S device 9 and DRM device 10 – column 4, lines 65 – 66, column 7, lines 35 - 43),

determining to send a measurement report of said received downlink radio signals to said cellular mobile data communication domain (a computer may receive from a transmitter/receiver station, in a switching device that controls access to a communication network and receives and sends data via radio transmission, data that the computer then evaluates in order to allocate to the transmitter/receiver station appropriate radio transmission systems for a communication. The computer may be part of the mobile transmitter/receiver station 10 – Figs. 1, 2, column 2, lines 9 – 14, column 2, lines 47 – 53, column 4, lines 13 – 21, column 4, lines 36 – 43, column 5, lines 20 – 40, column 6, lines 4 – 13, column 6, lines 20 – 28, column 7, lines 35 – 43);

receiving a handover command at said user apparatus for changing to another available downlink radio signal (if the selected radio transmission does not meet the subscriber profile criteria at step 15, a new transmission system may be selected at step 14. Also, if the network capacity utilization is too high at step 17, a new transmission system may be selected at step 14. If this happened during a data transmission, the data flow that is being exchanged between transmitter/receiver stations 10 and the respective radio transmission system, is then handed over to the new radio transmission system device, so that no data

loss occurs - Figs. 1, 2, column 2, lines 47 – 53, column 6 line 59 through column 7, line 6, column 7, lines 35 – 43. The computer in switching device 3 calculates on the basis of the subscriber profile which service of a radio transmission system is the cheapest, and selects that service if the availability and speed of the transmitter/receiver station permit it – Fig/ 2/14, column 2, lines 47 – 53, column 6, lines 37 – 58, column 7, lines 35 - 43),

determining to send a confirmation from said user apparatus to the digital broadcast data communication domain **for moving a downlink service delivered via the cellular mobile data communication domain to the digital broadcast data communication domain** (if the selected radio transmission does not meet the subscriber profile criteria at step 15, a new transmission system may be selected at step 14. Also, if the network capacity utilization is too high at step 17, a new transmission system may be selected at step 14. If this happened during a data transmission, the data flow that is being exchanged between transmitter/receiver stations 10 and the respective radio transmission system, is then handed over to the new radio transmission system device, so that no data loss occurs - Figs. 1, 2, column 2, lines 47 – 53, column 6 line 59 through column 7, line 6, column 7, lines 35 - 43), wherein, a handover (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a

location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10) corresponding to said command comprises a partial handover so that the signals and service relating to the downlink of the cellular mobile data communication are configured to be handed over (the switching device 3 sends and receives data to and from UMTS-S device 4, GSM device 6 and UMTS-T device 7 - column 4, lines 63 – 64) to the digital broadcast data communication domain (broadcast distribution systems have only a downlink – column 3, line 51 through column 4, line 13. The switching device 3 only transmits data to DAB device 5, DVB-T device 8, DVB-S device 9 and DRM device 10 – column 4, lines 65 – 66, column 7, lines 35 – 43),

but, is silent on, **determining to send a confirmation from said user apparatus to the digital broadcast data communication domain"** for moving a downlink service delivered via the cellular mobile data communication domain to the digital broadcast data communication domain.

Dorenbosch teaches in detail, searching for an appropriate connection. Searching 909 for the appropriate wireless IP connection may include one or more of determining that an available connection includes an access point and suitable services (Fig. 9/909, paragraph 0055)..Setting up the second IP

connection with the second IP address for the first station where the first IP connection is a primary connection and the second IP connection is a secondary connection with both existing concurrently (ABSTRACT, Fig. 9/907, paragraph 0055). With both existing concurrent connections, but data is only sent through one (Fig. 2, paragraph 0024).

It would have been obvious to one of ordinary skill in the art, at the time of invention, to modify allocation of radio transmission systems for data transmission (Brandes, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10), would have been incorporated the concurrent connections for IP connections and seamless handoff between the first and second IP connections (Dorenbosch, ABSTRACT, Figs. 1 - 9, paragraphs 0024, 0055) for measuring the transmission quality using a signal field strength and/or an error rate, and allow a determination to be made as to the transmission quality of a radio transmission system (Brandes, column 2, lines 9 - 14).

Both Brandes and Dorenbosch teaches all the claimed features,

but, does not clearly disclose, maintaining the communication via the same uplink connection prior to said handover.

Cave teaches, after initiating soft handover, same uplink and downlink data with the current cell/sector is communicating using the currently used uplink and downlink timeslots (ABSTRACT, paragraphs 0012, 0023).

It would have been obvious to one of ordinary skill in the art, at the time of invention, to modify allocation of radio transmission systems for data transmission combined Brandes and Dorenbosch (Brandes, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10), would have been incorporated using the same uplink and downlink data before and after soft handover of Cave (Cave, ABSTRACT, paragraphs 0012, 0023), for design flexibility for code allocations for soft/softer handover, and all diversity schemes including selection diversity, gain to compensate for the poorer signal conditions (Cave, paragraphs 0010, 0011).

Regarding claim 22, Brandes discloses,

An apparatus (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through

column 7, line 43, claims 1, 10. Mobile radio networks with duplex operation – Fig. 1, column 3, lines 33 – 51. The switching device 3 sends and receives data to and from UMTS-S device 4, GSM device 6 and UMTS-T device 7 - column 4, lines 63 – 64. Broadcast distribution systems have only a downlink – column 3, line 51 through column 4, line 13. The switching device 3 only transmits data to DAB device 5, DVB-T device 8, DVB-S device 9 and DRM device 10 – column 4, lines 65 – 66, column 7, lines 35 - 43), comprising:

a processor; and a memory including computer program code, the memory and the computer program code configured to, with the processor, cause the apparatus at least to perform: determine to measure available downlink radio signals (the computer in switching device 3 calculates on the basis of the subscriber profile which service of a radio transmission system is the cheapest, and selects that service if the availability and speed of the transmitter/receiver station permit it – Fig/ 2/14, column 2, lines 47 – 53, column 6, lines 37 – 58, column 7, lines 35 - 43),

determine to transmit the measurements (a computer may receive from a transmitter/receiver station, in a switching device that controls access to a communication network and receives and sends data via radio transmission, data that the computer then evaluates in order to allocate to the transmitter/receiver station appropriate radio transmission systems for a

communication – Figs. 1, 2, column 2, lines 47 – 53, column 4, lines 13 – 21, column 4, lines 36 – 43, column 5, lines 20 – 40, column 6, lines 4 – 13, column 6, lines 20 – 28, column 7, lines 35 – 43. The data concerning the subscriber profile and the transmission quality may be transmitted to the computer via an uplink form the mobile transmitter/receiver station, so that a signaling operation may be utilized to use these data for radio transmission system selection. The transmission quality may be measured using a signal field strength and/or an error rate – Figs. 1, 2, column 1, line 65 through column 2, line 14);

receive a handover command for changing to another available downlink radio signal (if the selected radio transmission does not meet the subscriber profile criteria at step 15, a new transmission system may be selected at step 14. Also, if the network capacity utilization is too high at step 17, a new transmission system may be selected at step 14. If this happened during a data transmission, the data flow that is being exchanged between transmitter/receiver stations 10 and the respective radio transmission system, is then handed over to the new radio transmission system device, so that no data loss occurs - Figs. 1, 2, column 2, lines 47 – 53, column 6 line 59 through column 7, line 6, column 7, lines 35 – 43. The computer in switching device 3 calculates on the basis of the subscriber profile which service of a radio transmission system is the cheapest, and selects that service if the availability and speed of the transmitter/receiver station permit

it – Fig/ 2/14, column 2, lines 47 – 53, column 6, lines 37 – 58, column 7, lines 35 - 43),

determine to transmit a confirmation for in part performing a handover (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10. If the selected radio transmission does not meet the subscriber profile criteria at step 15, a new transmission system may be selected at step 14. Also, if the network capacity utilization is too high at step 17, a new transmission system may be selected at step 14. If this happened during a data transmission, the data flow that is being exchanged between transmitter/receiver stations 10 and the respective radio transmission system, is then handed over to the new radio transmission system device, so that no data loss occurs - Figs. 1, 2, column 2, lines 47 – 53, column 6 line 59 through column 7, line 6, column 7, lines 35 – 43)) corresponding to said command so, the handover (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of

a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10) is configured to be established only between a downlink of a digital generally bi-directional communications service (the switching device 3 sends and receives data to and from UMTS-S device 4, GSM device 6 and UMTS-T device 7 - column 4, lines 63 – 64) and a digital generally unidirectional broadcast communications service (broadcast distribution systems have only a downlink – column 3, line 51 through column 4, line 13. The switching device 3 only transmits data to DAB device 5, DVB-T device 8, DVB-S device 9 and DRM device 10 – column 4, lines 65 – 66, column 7, lines 35 - 43).

wherein the traffic was communicated prior to said handover, via the uplink (a computer may receive from a transmitter/receiver station, in a switching device that controls access to a communication network and receives and sends data via radio transmission, data that the computer then evaluates in order to allocate to the transmitter/receiver station appropriate radio transmission systems for a communication . Here, the traffic is communicated prior to handover via the uplink– Figs. 1, 2, column 2, lines 47 – 53, column 4, lines 13 – 21, column 4, lines 36 – 43, column 5, lines 20 – 40, column 6, lines 4 – 13, column 6, lines 20 – 28, column 7, lines 35 – 43),

but, does not clearly disclose, traffic, via “an uplink of the digital generally bi-directional communications service”.

Dorenbosch teaches in detail, searching for an appropriate connection. Searching 909 for the appropriate wireless IP connection may include one or more of determining that an available connection includes an access point and suitable services (Fig. 9/909, paragraph 0055)..Setting up the second IP connection with the second IP address for the first station where the first IP connection is a primary connection and the second IP connection is a secondary connection with both existing concurrently (ABSTRACT, Fig. 9/907, paragraph 0055). With both existing concurrent connections, but data is only sent through one (Fig. 2, paragraph 0024).

It would have been obvious to one of ordinary skill in the art, at the time of invention, to modify allocation of radio transmission systems for data transmission (Brandes, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10), would have been incorporated the concurrent connections for IP connections and seamless handoff between the first and second IP connections (Dorenbosch, ABSTRACT, Figs. 1 - 9, paragraphs 0024, 0055) for measuring the transmission quality using a signal field strength and/or an error rate, and allow a determination to be made as to the transmission quality of a radio transmission system (Brandes, column 2, lines 9 - 14).

Both Brandes and Dorenbosch teaches all the claimed features,

but, does not clearly disclose, maintaining the communication via the same uplink connection prior to said handover.

Cave teaches, after initiating soft handover, same uplink and downlink data with the current cell/sector is communicating using the currently used uplink and downlink timeslots (ABSTRACT, paragraphs 0012, 0023).

It would have been obvious to one of ordinary skill in the art, at the time of invention, to modify allocation of radio transmission systems for data transmission combined Brandes and Dorenbosch (Brandes, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10), would have been incorporated using the same uplink and downlink data before and after soft handover of Cave (Cave, ABSTRACT, paragraphs 0012, 0023), for design flexibility for code allocations for soft/softer handover, and all diversity schemes including selection diversity, gain to compensate for the poorer signal conditions (Cave, paragraphs 0010, 0011).

Regarding claim 23, Brandes discloses,

an apparatus (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10. Mobile radio networks with duplex operation – Fig. 1, column 3, lines 33 – 51. The switching device 3 sends and receives data to and from UMTS-S device 4, GSM device 6 and UMTS-T device 7 - column 4, lines 63 – 64. Broadcast distribution systems have only a downlink – column 3, line 51 through column 4, line 13. The switching device 3 only transmits data to DAB device 5, DVB-T device 8, DVB-S device 9 and DRM device 10 – column 4, lines 65 – 66, column 7, lines 35 - 43), comprising:

a receiver configured to determine to measure available downlink radio signals, and a transceiver configured to determine to transmit the measurements (a computer may receive from a transmitter/receiver station, in a switching device that controls access to a communication network and receives and sends data via radio transmission, data that the computer then evaluates in order to allocate to the transmitter/receiver station appropriate radio transmission systems for a communication – Figs. 1, 2, column 2, lines 47 – 53, column 4, lines 13 – 21, column 4, lines 36 – 43, column 5, lines 20 – 40, column 6, lines 4 – 13, column

6, lines 20 – 28, column 7, lines 35 – 43. The data concerning the subscriber profile and the transmission quality may be transmitted to the computer via an uplink form the mobile transmitter/receiver station, so that a signaling operation may be utilized to use these data for radio transmission system selection. The transmission quality may be measured using a signal field strength and/or an error rate – Figs. 1, 2, column 1, line 65 through column 2, line 14);

said receiver further configured to receive a handover command for changing to another available downlink radio signal (if the selected radio transmission does not meet the subscriber profile criteria at step 15, a new transmission system may be selected at step 14. Also, if the network capacity utilization is too high at step 17, a new transmission system may be selected at step 14. If this happened during a data transmission, the data flow that is being exchanged between transmitter/receiver stations 10 and the respective radio transmission system, is then handed over to the new radio transmission system device, so that no data loss occurs - Figs. 1, 2, column 2, lines 47 – 53, column 6 line 59 through column 7, line 6, column 7, lines 35 – 43. The computer in switching device 3 calculates on the basis of the subscriber profile which service of a radio transmission system is the cheapest, and selects that service if the availability and speed of the transmitter/receiver station permit it – Fig/ 2/14, column 2, lines 47 – 53, column 6, lines 37 – 58, column 7, lines 35 - 43),

said transceiver further configured to determine to transmit a confirmation for in part performing said a handover corresponding to said command so that said handover is (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10) configured to be established only between a downlink of a digital generally bi-directional communication service and (the switching device 3 sends and receives data to and from UMTS-S device 4, GSM device 6 and UMTS-T device 7 - column 4, lines 63 – 64) and a digital generally unidirectional broadcast communications service (broadcast distribution systems have only a downlink – column 3, line 51 through column 4, line 13. The switching device 3 only transmits data to DAB device 5, DVB-T device 8, DVB-S device 9 and DRM device 10 – column 4, lines 65 – 66, column 7, lines 35 - 43);

and determine to maintain to communicate with completion of said handover, wherein the traffic was communicated prior to said handover, via the uplink (a computer may receive from a transmitter/receiver station, in a switching device that controls access to a communication network and receives and sends data via radio transmission, data that the computer then evaluates in order to allocate

to the transmitter/receiver station appropriate radio transmission systems for a communication . Here, the traffic is communicated prior to handover via the uplink– Figs. 1, 2, column 2, lines 47 – 53, column 4, lines 13 – 21, column 4, lines 36 – 43, column 5, lines 20 – 40, column 6, lines 4 – 13, column 6, lines 20 – 28, column 7, lines 35 – 43).

but, does not clearly disclose, traffic, via “an uplink of the digital generally bi-directional communications service”.

Dorenbosch teaches in detail, searching for an appropriate connection. Searching 909 for the appropriate wireless IP connection may include one or more of determining that an available connection includes an access point and suitable services (Fig. 9/909, paragraph 0055)..Setting up the second IP connection with the second IP address for the first station where the first IP connection is a primary connection and the second IP connection is a secondary connection with both existing concurrently (ABSTRACT, Fig. 9/907, paragraph 0055). With both existing concurrent connections, but data is only sent through one (Fig. 2, paragraph 0024).

It would have been obvious to one of ordinary skill in the art, at the time of invention, to modify allocation of radio transmission systems for data transmission (Brandes, Figs. 1, 2, column 2, line 65 through column 7, line 43,

claims 1, 10), would have been incorporated the concurrent connections for IP connections and seamless handoff between the first and second IP connections (Dorenbosch, ABSTRACT, Figs. 1 - 9, paragraphs 0024, 0055) for measuring the transmission quality using a signal field strength and/or an error rate, and allow a determination to be made as to the transmission quality of a radio transmission system (Brandes, column 2, lines 9 - 14).

Both Brandes and Dorenbosch teaches all the claimed features,

but, does not clearly disclose, maintaining the communication via the same uplink connection prior to said handover.

Cave teaches, after initiating soft handover, same uplink and downlink data with the current cell/sector is communicating using the currently used uplink and downlink timeslots (ABSTRACT, paragraphs 0012, 0023).

It would have been obvious to one of ordinary skill in the art, at the time of invention, to modify allocation of radio transmission systems for data transmission combined Brandes and Dorenbosch (Brandes, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10), would have been incorporated using the same uplink and downlink data before and after soft handover of Cave (Cave, ABSTRACT, paragraphs 0012, 0023), for design flexibility for code

allocations for soft/softer handover, and all diversity schemes including selection diversity, gain to compensate for the poorer signal conditions (Cave, paragraphs 0010, 0011).

Regarding claim 24, Brandes discloses,

an apparatus (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10. Mobile radio networks with duplex operation – Fig. 1, column 3, lines 33 – 51. The switching device 3 sends and receives data to and from UMTS-S device 4, GSM device 6 and UMTS-T device 7 - column 4, lines 63 – 64. Broadcast distribution systems have only a downlink – column 3, line 51 through column 4, line 13. The switching device 3 only transmits data to DAB device 5, DVB-T device 8, DVB-S device 9 and DRM device 10 – column 4, lines 65 – 66, column 7, lines 35 - 43), comprising:

a receiver configured to receive a measurement about available downlink radio signals (a computer may receive from a transmitter/receiver station, in a

switching device that controls access to a communication network and receives and sends data via radio transmission, data that the computer then evaluates in order to allocate to the transmitter/receiver station appropriate radio transmission systems for a communication – Figs. 1, 2, column 2, lines 47 – 53, column 4, lines 13 – 21, column 4, lines 36 – 43, column 5, lines 20 – 40, column 6, lines 4 – 13, column 6, lines 20 – 28, column 7, lines 35 – 43. The data concerning the subscriber profile and the transmission quality may be transmitted to the computer via an uplink form the mobile transmitter/receiver station, so that a signaling operation may be utilized to use these data for radio transmission system selection. The transmission quality may be measured using a signal field strength and/or an error rate – Figs. 1, 2, column 1, line 65 through column 2, line 14);

a processor configured to determine to select according to a predetermined criteria between the available radio signals (the computer in switching device 3 calculates on the basis of the subscriber profile which service of a radio transmission system is the cheapest, and selects that service if the availability and speed of the transmitter/receiver station permit it – Fig/ 2/14, column 2, lines 47 – 53, column 6, lines 37 – 58, column 7, lines 35 - 43),

said processor further configured to determine to change to another available downlink radio signal for at least in part performing a handover (if the selected

radio transmission does not meet the subscriber profile criteria at step 15, a new transmission system may be selected at step 14. Also, if the network capacity utilization is too high at step 17, a new transmission system may be selected at step 14. If this happened during a data transmission, the data flow that is being exchanged between transmitter/receiver stations 10 and the respective radio transmission system, is then handed over to the new radio transmission system device, so that no data loss occurs - Figs. 1, 2, column 2, lines 47 – 53, column 6 line 59 through column 7, line 6, column 7, lines 35 - 43), so that said handover is (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10) configured to be established between a digital generally bi-directional communications domain (the switching device 3 sends and receives data to and from UMTS-S device 4, GSM device 6 and UMTS-T device 7 - column 4, lines 63 – 64) and a digital generally unidirectional broadcast communications domain (broadcast distribution systems have only a downlink – column 3, line 51 through column 4, line 13. The switching device 3 only transmits data to DAB device 5, DVB-T device 8, DVB-S device 9 and DRM device 10 – column 4, lines 65 – 66, column 7, lines 35 - 43),

and determine to maintain to communicate with completion of said handover, wherein the traffic was communicated prior to said handover, via the uplink (a computer may receive from a transmitter/receiver station, in a switching device that controls access to a communication network and receives and sends data via radio transmission, data that the computer then evaluates in order to allocate to the transmitter/receiver station appropriate radio transmission systems for a communication . Here, the traffic is communicated prior to handover via the uplink– Figs. 1, 2, column 2, lines 47 – 53, column 4, lines 13 – 21, column 4, lines 36 – 43, column 5, lines 20 – 40, column 6, lines 4 – 13, column 6, lines 20 – 28, column 7, lines 35 – 43).

but, does not clearly disclose, traffic, via “an uplink of the digital generally bi-directional communications service”.

Dorenbosch teaches in detail, searching for an appropriate connection. Searching 909 for the appropriate wireless IP connection may include one or more of determining that an available connection includes an access point and suitable services (Fig. 9/909, paragraph 0055)..Setting up the second IP connection with the second IP address for the first station where the first IP connection is a primary connection and the second IP connection is a secondary connection with both existing concurrently (ABSTRACT, Fig. 9/907, paragraph

0055). With both existing concurrent connections, but data is only sent through one (Fig. 2, paragraph 0024).

Both Brandes and Dorenbosch teaches all the claimed features,

but, does not clearly disclose, maintaining the communication via the same uplink connection prior to said handover.

Cave teaches, after initiating soft handover, same uplink and downlink data with the current cell/sector is communicating using the currently used uplink and downlink timeslots (ABSTRACT, paragraphs 0012, 0023).

It would have been obvious to one of ordinary skill in the art, at the time of invention, to modify allocation of radio transmission systems for data transmission combined Brandes and Dorenbosch (Brandes, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10), would have been incorporated using the same uplink and downlink data before and after soft handover of Cave (Cave, ABSTRACT, paragraphs 0012, 0023), for design flexibility for code allocations for soft/softer handover, and all diversity schemes including selection diversity, gain to compensate for the poorer signal conditions (Cave, paragraphs 0010, 0011).

Regarding claim 25, Brandes discloses,

a method as claimed in claim 1, wherein uplink can be maintained when said partial handover is performed (if the transmission quality for a radio transmission system used by transmitter/receiver station 10 declines sharply, a handover to an alternative radio transmission system may automatically be performed, if possible. The data flow that is being exchanged between transmitter/receiver station 10 and the respective radio transmission system device is then handed over to the new radio transmission system device, so that no data loss occurs – column 6, lines 20 – 28, column 7, lines 1 – 6).

Regarding claim 26, Brandes discloses,

a method as claimed in claim 1, wherein the partial handover relates only to downlink radio communications (the data flow that is being exchanged between transmitter/receiver station 10 and the respective radio transmission system device is then handed over to the new radio transmission system device, so that no data loss occurs – column 6, lines 20 – 28, column 7, lines 1 – 6. The broadcast distribution systems have only a downlink – column 3, line 51 through column 4, line 13. The switching device 3 only transmits data to DAB device 5, DVB-T device 8, DVB-S device 9 and DRM device 10 – column 4, lines 65 – 66, column 7, lines 35 - 43).

Regarding claim 27, Brandes discloses,

a method as claimed in claim 26, wherein the partial handover relates (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10) only to downlink radio communications of the generally bi-directional communications service (the switching device 3 sends and receives data to and from UMTS-S device 4, GSM device 6 and UMTS-T device 7 - column 4, lines 63 – 64) and the generally unidirectional broadcast communications service (broadcast distribution systems have only a downlink – column 3, line 51 through column 4, line 13. The switching device 3 only transmits data to DAB device 5, DVB-T device 8, DVB-S device 9 and DRM device 10 – column 4, lines 65 – 66, column 7, lines 35 - 43).

Regarding claim 28, Brandes discloses,

a method as claimed in claim 1, wherein the partial handover (transmission of

data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10) is configured to be related to the service between a transmission of the generally unidirectional broadcast communications service (broadcast distribution systems have only a downlink – column 3, line 51 through column 4, line 13. The switching device 3 only transmits data to DAB device 5, DVB-T device 8, DVB-S device 9 and DRM device 10 – column 4, lines 65 – 66, column 7, lines 35 - 43) and a transmission of the downlink of the generally bi- directional communications service (the switching device 3 sends and receives data to and from UMTS-S device 4, GSM device 6 and UMTS-T device 7 - column 4, lines 63 – 64).

Regarding claim 29, Brandes discloses all the claimed features,

but, is silent of, a method as claimed in claim 1, further comprising “determining to maintain on a basis of said uplink bidirectional interaction channel to the digital generally unidirectional broadcast communication service”.

For the claimed feature, maintaining on a basis of said uplink bidirectional interaction channel to the digital generally unidirectional broadcast communication service, Dorenbosch teaches, setting up the second IP connection with the second IP address for the first station where the first IP connection is a primary connection and the second IP connection is a secondary connection with both existing concurrently (ABSTRACT, Fig. 9/907, paragraph 0055). With both existing concurrent connections, but data is only sent through one (Fig. 2, paragraph 0024).

It would have been obvious to one of ordinary skill in the art, at the time of invention, to modify allocation of radio transmission systems for data transmission (Brandes, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10), would have been incorporated the concurrent connections for IP connections and seamless handoff between the first and second IP connections (Dorenbosch, ABSTRACT, Figs. 1 - 9, paragraphs 0024, 0055) for measuring the transmission quality using a signal field strength and/or an error rate, and allow a determination to be made as to the transmission quality of a radio transmission system (Brandes, column 2, lines 9 - 14).

Claims 19 - 21 are under 35 U.S.C. 103(a) as being unpatentable over Brandes US Patent: US 6,920,327 B1 Jul. 19, 2005, and in view of Dorenbosch US PGPub: US 2004/0028009 A1 Feb. 12, 2004, and in view of Cave US PGPub: US 2005/0070287 A1 Mar. 31, 2005, and further in view of Grilli US PGPub: US 2003/0002525 A1 Jan. 2, 2003.

Regarding claim 19, Brandes discloses,

a method according claim 18, further comprising communicating in such a way that the cellular mobile data communication domain requests resources from the digital broadcast data communication domain (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10).

Both Brandes, Dorenbosch and Cave discloses all the claimed feature,

but, are silent on, "**obtaining an acknowledgement on available resources** of the digital broadcast data communication domain at the cellular data communication domain".

Grilli teaches, in detail the signaling performed while handover in hybrid network, wherein a mobile station measures and reports on the strength of signals received from a base station transceiver in a neighboring cell before being handed over that cell and the mobile station is handed over from the first to the second base station. Upon receiving handover command 1517 the UE/MS 1505 sends handover complete message 1521 (ABSTRACT, Figs., 1, 4B/HO REQUEST ACK, 9/HO REQUEST ACK, 15, paragraphs 0014, 0272 - 0281).

It would have been obvious to one of ordinary skill in the art, at the time of invention, to modify allocation of radio transmission systems for data transmission combined Brandes, Dorenbosch and Cave (combined Brandes, Dorenbosch and Cave, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10), would have been incorporated the detailed signaling messages between base station and UE/MS (Grilli, Figs. 1, 15, paragraph 0014) for measuring the transmission quality using a signal field strength and/or an error rate, and allow a determination to be made as to the transmission quality of a radio transmission system (Brandes, column 2, lines 9 - 14).

Regarding claim 20, Brandes discloses,

a method (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10. Broadcast distribution systems have only a downlink – column 3, line 51 through column 4, line 13. The switching device 3 only transmits data to DAB device 5, DVB-T device 8, DVB-S device 9 and DRM device 10 – column 4, lines 65 – 66, column 7, lines 35 – 43. Mobile radio networks with duplex operation – Fig. 1, column 3, lines 33 – 51. The switching device 3 sends and receives data to and from UMTS-S device 4, GSM device 6 and UMTS-T device 7 - column 4, lines 63 - 64), the method comprising:

determining to measure, at a user apparatus, received downlink radio signals (a computer may receive from a transmitter/receiver station, in a switching device that controls access to a communication network and receives and sends data via radio transmission, data that the computer then evaluates in order to allocate to the transmitter/receiver station appropriate radio transmission systems for a communication – Figs. 1, 2, column 2, lines 47 – 53, column 4, lines 13 – 21,

column 4, lines 36 – 43, column 5, lines 20 – 40, column 6, lines 4 – 13, column 6, lines 20 – 28, column 7, lines 35 – 43. The data concerning the subscriber profile and the transmission quality may be transmitted to the computer via an uplink form the mobile transmitter/receiver station, so that a signaling operation may be utilized to use these data for radio transmission system selection. The transmission quality may be measured using a signal field strength and/or an error rate – Figs. 1, 2, column 1, line 65 through column 2, line 14), of a digital broadcast data communication domain (broadcast distribution systems have only a downlink – column 3, line 51 through column 4, line 13. The switching device 3 only transmits data to DAB device 5, DVB-T device 8, DVB-S device 9 and DRM device 10 – column 4, lines 65 – 66, column 7, lines 35 - 43) and a cellular mobile data communication domain (mobile radio networks with duplex operation – Fig. 1, column 3, lines 33 – 51. The switching device 3 sends and receives data to and from UMTS-S device 4, GSM device 6 and UMTS-T device 7 - column 4, lines 63 – 64);

determining to send a measurement report of said received downlink radio signals to said digital broadcast data communication domain (a computer may receive from a transmitter/receiver station, in a switching device that controls access to a communication network and receives and sends data via radio transmission, data that the computer then evaluates in order to allocate to the transmitter/receiver station appropriate radio transmission systems for a

communication – Figs. 1, 2, column 2, lines 47 – 53, column 4, lines 13 – 21, column 4, lines 36 – 43, column 5, lines 20 – 40, column 6, lines 4 – 13, column 6, lines 20 – 28, column 7, lines 35 – 43. The computer in switching device 3 calculates on the basis of the subscriber profile which service of a radio transmission system is the cheapest, and selects that service if the availability and speed of the transmitter/receiver station permit it – Fig/ 2/14, column 2, lines 47 – 53, column 6, lines 37 – 58, column 7, lines 35 - 43),

receiving a handover command at said user apparatus for changing to another available downlink radio signal (if the selected radio transmission does not meet the subscriber profile criteria at step 15, a new transmission system may be selected at step 14. Also, if the network capacity utilization is too high at step 17, a new transmission system may be selected at step 14. If this happened during a data transmission, the data flow that is being exchanged between transmitter/receiver stations 10 and the respective radio transmission system, is then handed over to the new radio transmission system device, so that no data loss occurs - Figs. 1, 2, column 2, lines 47 – 53, column 6 line 59 through column 7, line 6, column 7, lines 35 – 43. The computer in switching device 3 calculates on the basis of the subscriber profile which service of a radio transmission system is the cheapest, and selects that service if the availability and speed of the transmitter/receiver station permit it – Fig/ 2/14, column 2, lines 47 – 53, column 6, lines 37 – 58, column 7, lines 35 - 43), and

determining to send a conformation from said user apparatus to the cellular mobile data communication domain for **moving a downlink service delivered via the digital broadcast data communication domain to a downlink of the cellular mobile data communication domain** (it the selected radio transmission does not meet the subscriber profile criteria at step 15, a new transmission system may be selected at step 14. Also, if the network capacity utilization is too high at step 17, a new transmission system may be selected at step 14. If this happened during a data transmission, the data flow that is being exchanged between transmitter/receiver stations 10 and the respective radio transmission system, is then handed over to the new radio transmission system device, so that no data loss occurs - Figs. 1, 2, column 2, lines 47 – 53, column 6 line 59 through column 7, line 6, column 7, lines 35 - 43),

wherein, a handover (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10) corresponding to said command comprises a partial handover so that signals and service relating to the digital

broadcast data communication domain (broadcast distribution systems have only a downlink – column 3, line 51 through column 4, line 13. The switching device 3 only transmits data to DAB device 5, DVB-T device 8, DVB-S device 9 and DRM device 10 – column 4, lines 65 – 66, column 7, lines 35 - 43) are configured to be handed over to a downlink of the cellular mobile data communication domain (the switching device 3 sends and receives data to and from UMTS-S device 4, GSM device 6 and UMTS-T device 7 - column 4, lines 63 – 64),

but, does not clearly disclose, “determining to measure, at a user apparatus”.

Dorenbosch teaches in detail, searching for an appropriate connection. Searching 909 for the appropriate wireless IP connection may include one or more of determining that an available connection includes an access point and suitable services (Fig. 9/909, paragraph 0055)..Setting up the second IP connection with the second IP address for the first station where the first IP connection is a primary connection and the second IP connection is a secondary connection with both existing concurrently (ABSTRACT, Fig. 9/907, paragraph 0055). With both existing concurrent connections, but data is only sent through one (Fig. 2, paragraph 0024).

It would have been obvious to one of ordinary skill in the art, at the time of invention, to modify allocation of radio transmission systems for data

transmission (Brandes, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10), would have been incorporated the concurrent connections for IP connections and seamless handoff between the first and second IP connections (Dorenbosch, ABSTRACT, Figs. 1 - 9, paragraphs 0024, 0055) for measuring the transmission quality using a signal field strength and/or an error rate, and allow a determination to be made as to the transmission quality of a radio transmission system (Brandes, column 2, lines 9 - 14).

Both Brandes and Dorenbosch teaches all the claimed features,

but, does not clearly disclose, maintaining the communication via the same uplink connection prior to said handover.

Cave teaches, after initiating soft handover, same uplink and downlink data with the current cell/sector is communicating using the currently used uplink and downlink timeslots (ABSTRACT, paragraphs 0012, 0023).

It would have been obvious to one of ordinary skill in the art, at the time of invention, to modify allocation of radio transmission systems for data transmission combined Brandes and Dorenbosch (Brandes, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10), would have been incorporated using the same uplink and downlink data before and after soft handover of Cave

(Cave, ABSTRACT, paragraphs 0012, 0023), for design flexibility for code allocations for soft/softer handover, and all diversity schemes including selection diversity, gain to compensate for the poorer signal conditions (Cave, paragraphs 0010, 0011).

Both Brandes, Dorenbosch and Cave discloses all the claimed feature,

but, are silent on, "**determining to send a conformation from said user apparatus to the cellular mobile data communication domain" for** moving a downlink service delivered via the digital broadcast data communication domain to a downlink of the cellular mobile data communication domain.

Grilli teaches, in detail the signaling performed while handover in hybrid network, wherein a mobile station measures and reports on the strength of signals received from a base station transceiver in a neighboring cell before being handed over that cell and the mobile station is handed over from the first to the second base station. Upon receiving handover command 1517 the UE/MS 1505 sends handover complete message 1521 (ABSTRACT, Figs., 1, 4B/HO REQUEST ACK, 9/HO REQUEST ACK, 15, paragraphs 0014, 0272 - 0281).

It would have been obvious to one of ordinary skill in the art, at the time of invention, to modify allocation of radio transmission systems for data

transmission combined Brandes, Dorenbosch and Cave (combined Brandes, Dorenbosch and Cave Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10), would have been incorporated the detailed signaling messages between base station and UE/MS (Grilli, Figs. 1, 15, paragraph 0014) for measuring the transmission quality using a signal field strength and/or an error rate, and allow a determination to be made as to the transmission quality of a radio transmission system (Brandes, column 2, lines 9 - 14).

Regarding claim 21, it is similar to claim 19 above and is rejected on the same grounds.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will

the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

Any inquiry concerning this communication from the examiner should be directed to Nimesh Patel at (571) 270-1228, normally reached on Mon-Thur. 7:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rafael, Perez-Gutierrez, can be reached at (571) 272-7915.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR of Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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